



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,854	12/19/2001	Mahesh Sambasivam	42390P13267	9103
8791	7590	06/15/2004	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD, SEVENTH FLOOR LOS ANGELES, CA 90025			NGUYEN, KHIEM D	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 10/033,854	Applicant(s) SAMBASIVAM ET AL.	
	Examiner Khiem D Nguyen	Art Unit 2823	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 June 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 1-20.

Claim(s) withdrawn from consideration: none.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____


W. DAVID COLEMAN
PRIMARY EXAMINER

Continuation of 5. does NOT place the application in condition for allowance because: Applicants contend that the reference Akram et al., U.S. Patent 5,766,982 herein known as Akram neither teaches or suggest disposing an underfill material through the through-hole such that the underfill material is dispersed by capillary action between the microelectronics die active surface and the substrate first surface. In response to Applicants contention that Akram neither teaches or suggest disposing an underfill material through the through-hole such that the underfill material is dispersed by capillary action between the microelectronics die active surface and the substrate first surface, examiner respectfully disagree. Applicants are directed to col. 1, lines 46-58 where Akram provides evidence that dispensing the underfill material into the gap between the flip chip and the substrate by capillary action is known. Furthermore, Akram discloses in col. 6, line 34 to col. 7, line 30 and FIGS. 5-7, disposing an underfill material 28 through the throughhole 60 using the underfill dispenser 34 between the microelectronic die 12 active surface 20 and the substrate 10 first surface 18. Although Akram does not explicitly mention the underfill material is dispersed by capillary action in the cited paragraphs. It is inherent that the underfill material 28 as disclosed in FIGS. 5-7 is dispersed by capillary action using the underfill dispenser 34 because the underfill process as disclosed in the present embodiment of Akram and those of conventional direct chip bonding techniques as disclosed in FIG. 1 (col. 4, line 53 to col. 5, line 15) both using the same underfill dispenser 34 to disperse the underfill material 28. Additionally, Akram discloses in col. 4, lines 53--59, the underfill material 28 is applied with an underfill dispenser 34, such as syringe having a suitable nozzle thereon or any other dispensing means known in the art. For these reasons, examiner holds the rejection proper.